

10/534104

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of  
NISHIDA et al.

Confirmation No. Not Assigned  
Atty Docket. No. 46244

International Appln. PCT/JP03/14210

Group Art Unit: Not Assigned  
Examiner: Not Assigned

This Appln. Filed: May 6, 2005

Title: METHOD FOR PRODUCING FERMENTED BEVERAGES

\* \* \* \* \*

May 6, 2005

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The applicants hereby submits the attached PTO Form 1449 and copies of documents listed thereon which are disclosed in the specification of the subject application. This Information Disclosure Statement (IDS) is submitted along with the filing of the subject application and is thus filed before the issue by the PTO of any substantive Office Action in this application. **Accordingly, no additional IDS filing fee is required.**

Please note that the documents listed on the PTO Form 1449 as have an English language Abstract submitted herewith and listed document has an English language Abstract and a copy of English language counterpart EP 523333 A1. Additionally, please note that listed document is also listed in the International Search Report (ISR) which issued in the subject PCT application and which ISR has been submitted with the filing of the present U.S. application.

The applicants provide the following comments regarding the cited documents:

1. Japanese Patent Public Disclosure No. Sho 58-155075

This reference shows a method for preventing the development of off-flavors.

However, since this reference teaches that the addition of yeast extract or the like allows reduction of a must smell in must wine, the invention of the reference is different from the present invention which relates to a method for producing fermented beverages at least through the step of stopping yeast-based fermentation in mid course, wherein the L-methionine concentration or the FAN level in wort is adjusted to prevent the development of off-flavors.

2. Japanese Patent Public Disclosure No. Hei 07-303457

This reference shows a method for preventing the development of off-flavors.

However, since this reference teaches the use of a yeast strain modified to carry a structural gene(s) in preventing the generation of hydrogen sulfide in beers, the invention of the reference is different from the present invention which relates to a method for producing fermented beverages at least through the step of stopping yeast-based fermentation in mid course, wherein the L-methionine concentration or the FAN level in wort is adjusted to prevent the development of off-flavors.

3. Japanese Patent Public Disclosure No. Hei 10-57044

This reference shows a method for controlling aroma.

However, since this reference teaches that the levels of malic acid and succinic acid are controlled by adjusting the fermentation temperature or the amount of yeast added, the invention of the reference is at least different from the present invention which relates to a method for producing fermented beverages through the step of stopping yeast-based fermentation in mid course, wherein the L-methionine

concentration or the FAN level in wort is adjusted to prevent the development of off-flavors.

4. Japanese Patent Public Disclosure No. He! 10-52251

This reference shows a method for controlling aroma.

However, since this reference teaches that the levels of malic acid and succinic acid are controlled by controlling the level of free amino nitrogen generated in wort, the invention of the reference is at least different from the present invention which relates to a method for producing fermented beverages through the step of stopping yeast-based fermentation in mid course, wherein the L-methionine concentration or the FAN level in wort is adjusted to prevent the development of off-flavors.

5. Japanese Patent Public Disclosure No. Sho 61-58573

This reference shows a method for preventing the development of off-flavors.

However, since this reference teaches that diacetyl level can be reduced by avoiding introducing excess yeasts at a second stage of a two-stage fermentation process, the invention of the reference is at least different from the present invention which relates to a method for producing fermented beverages through the step of stopping yeast-based fermentation in mid course, wherein the L-methionine concentration or the FAN level in wort is adjusted to prevent the development of off-flavors.

6. Beer and Coolers

This reference describes methods for producing low-alcohol beers.

7. MBAA TECHNICAL QUARTERLY Vol.17, No4,1980

This reference describes a method for producing low-alcohol beer by using yeast incapable of fermenting maltose.

8. Abriss der Bierbrauerei

This reference describes a method for producing low-alcohol beer by stopping the fermentation by cooling at the standard fermentation process.

However, a person of ordinary skill in the art would find it difficult to believe that these reports provide adequate discussion on the prevention of off-flavor development.

9. Japanese Patent Public Disclosure No. Hei 5-68528

This reference describes a method for producing low-alcohol beer by the addition of  $\alpha$ -glucosidase in the mashing step, whereby fermentable sugars in a saccharified solution are converted into non-fermentable sugars.

However, a person of ordinary skill in the art would find it difficult to believe that these reports provide adequate discussion on the prevention of off-flavor development.

10. European Brewery Convention, Proceeding of the 19th Congress, 1983

This reference describes a method for producing low-alcohol beer by making a short contact between wort and yeast.

However, this approach at least suffers from the problem of a residual wort smell.

11. UK patent 2033424, 1980

This reference describes a method for producing low-alcohol beer by mixing normal beer with low-alcohol beer prepared from wort at low extract concentration

12. Japanese Patent Public Disclosure No. 2002-291465

This reference shows a method for preventing the development of off-flavors at a fermentation stopping process.

However, since this reference teaches the use of mutated yeast strains to control a diacetyl smell in Japanese rice wines of low-alcohol concentration, the invention of the reference is different from the present invention which relates to a method for producing fermented beverages at least through the step of stopping yeast-based fermentation in mid course, wherein the L-methionine concentration or the FAN level in wort is adjusted to prevent the development of off-flavors.

13. Metabolic Maps

This reference is referred to show that hydrogen sulfide generated during fermentation is closely related to yeast metabolism in sulfur-containing amino acid production.

14. MBAA TECHNICAL QUARTERLY Vol. 21, 1984

This reference is referred to show that T-VDK production is affected by amino acid concentration in fermenting wort.

This IDS is intended to be in full compliance with the rules, but should the Examiner find any part of its required content to have been omitted, prompt notice to that effect is earnestly solicited, along with additional time under Rule 97(f), to enable Applicant to comply fully.

Consideration of the foregoing and enclosures plus the return of a copy of the enclosed Form PTO-1449 with the Examiner's initials in the left column per MPEP 609 are earnestly solicited along with an early action on the merits.

Entry of this IDS and favorable consideration of this application are respectfully requested.

Respectfully submitted,

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Date This Paper Filed : May 6, 2005

Sheet 1 of 2

Application Number Not Yet Assigned

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First Named Inventor NISHIDA et al.

Group Art Unit Not Yet Assigned

Examiner Name Not Yet Assigned

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**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Appln. Filing Date			
	AR					
	BR					
	CR					
	DR					
	ER					

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Inventor/Applicant Name	Document Number	Country	Date of Publication of Cited Document MM-DD-YYYY	English Abstract	Counterpart U.S. Appl. No.
						Encl No	
	FR	Sannoro Breweries	Sho 58-155075	JAPAN	September 14 1983	YES	
	GR	Kumamoto Seifun KK	Hei 07-303457	JAPAN	November 21 1995	YES	
	HR	Sannoro Breweries	Hei 10-57044	JAPAN	March 3 1998	YES	
	IR	Sannoro Breweries	Hei 10-52251	JAPAN	February 24 1998	YES	
	JR	Kirin Brewery Co., Ltd.	Sho 61-058573	JAPAN	March 25 1986	YES	
	KR	Sannoro Breweries	Hei 5-68528	JAPAN	March 23 1993	YES	

**OTHER (Including in this order, Author, Title, Periodical Name, Date, Pertinent Pages)**

	LR	Moll, M. "Beers & Coolers- Definition Manufacture Composition", Intercept, Ltd.		
	MR	Brenner, M.W., "Beers fro the Future" MBAA Technical Quarterly, Vol. 17, No. 4, pp 185-195, 1980		
	NR	Abriess der Bierbrauerel, Verschiedene obergarige Biere und ihre Herstellung, p369.		
	OR	Schur, F. "A New Method of Producing Alcohol-Free Beer", European Brewery Convention, Proceeding of the 19 <sup>th</sup> Congress, 1983		
	PR	Metabolic Maps		
	QR	Nakatani, K., et al. "Kinetic Study of Vicinal...Diketones" MBAA Technical Quarterly, Vol. 21, No.2 1984		

Examiner Signature

Date Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3) <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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	AS					
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	CS					
	DS					
	ES					

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						Encl No	
	ES	Sannom Breweries, Ltd.	FP 0 523 333	EUROPE	January 20 1993	YES	
	GS	Barrell G. W.	GR 2 033 424	Britain	May 21 1980		
	HS	Miyagi-Ken Miyagiken Shuzo	Hei 2002-291465	JAPAN	October 8 2002	YES	
	IS						
	JS						
	KS						

OTHER (Including in this order, Author, Title, Periodical Name, Date, Pertinent Pages)

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	FR	Takeda Chemical Industries	JP 43 13670	JAPAN	June 10 1968		
	GR	Kirin Beer Kabushiki Kaisha	EP 0160442	EUROPE	November 6 1985		
	HR	Kyowa Hakko Kogyo Co., Ltd.	JP 10 179131	JAPAN	July 7 1998		
	IR	Kirin Beer Kabushiki Kaisha	EP 228009	EUROPE	July 8 1987		
	JR	Kirin Beer Kabushiki Kaisha	EP 339532	EUROPE	November 2 1989		
	KR	Kirin Beer Kabushiki Kaisha	EP 160442	EUROPE	November 6 1985		

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